

Remarks

Claims 1-22 were originally filed in this application. In response to the first office action, Applicant canceled claims 2, 10, 16 and 19, amended claims 1, 3-4, 11-13, 15 and 20-22 and added new claims 23 and 24. In response to the final office action, Applicant amended claims 1, 15, 23 and 24. In the present office action mailed April 20, 2004, the Examiner rejects claims 1, 3-9, 11-15, 17-18 and 20-24 under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,051,945, issued to Furukawa (hereinafter "Furukawa") in view of U.S. Patent No. 5,509,504 issued to McHugh et al. (hereinafter "McHugh").

By way of this response, Applicant cancels 4, 5 and 17, amends claims 1, 3, 6, 11, 12, 15, 18 and 20-23 and adds new claims 25 and 26 to distinguish Applicant's claimed invention over the combination of references applied by the Examiner. Applicant believes that the application, as amended, is in condition for allowance and reconsideration of the application as amended is respectfully requested.

A. Rejections Under 35 U.S.C. §103

The Examiner rejects claims 1, 3-9, 11-15 and 17-18 and 20-24 under 35 U.S.C. §103(a) as being unpatentable over Furukawa in view of McHugh. The Examiner's proposed combination of references does not teach nor suggest all of the claim limitations as set forth in the claims. As such, Applicant respectfully requests reconsideration of the rejection of the claims as presented in this response.

The combination of references applied by the Examiner does not obviate Applicant's claimed invention. Furukawa discloses and suggests a single sensing device anti-pinch system. Furukawa's anti-pinch detection system requires the Hall effect sensor to be positioned on the rotary shaft of the motor. The sensor detects window position and velocity of the window by measuring motor shaft rotation speed, not a coding arrangement applied directly to the window as claimed by Applicant.

McHugh discloses and suggests a dual sensing device elevator car door anti-pinch system having a magnetic or optical encoder strip disposed on the door which is monitored by a photodetector to determine the position of the door and a contact pinch condition sensor. However, the McHugh photodetector and optical encoder strip sensing devices provide only position measurements, not pinch condition data, to the controller. The controller must obtain pinch condition sensor information from an independent contact sensor source to stop the travel of the elevator doors.

It would not be obvious to one of ordinary skill in the art to combine the Furukawa and McHugh references to create Applicant's claimed invention. Furukawa does not contemplate the use of dual sensing devices to detect a pinch condition between the window and window frame. Further, Furukawa teaches away from Applicant's claimed invention, monitoring motor shaft revolutions rather than window position. Conversely, while McHugh monitors window position and detects pinch conditions using a contact sensor source, McHugh does not contemplate the use of a non-contact sensor disposed within the door frame as taught by Applicant. No suggestion exists to motivate one of ordinary skill in the art to combine the McHugh elevator door position system with the Furukawa motor shaft position monitoring system to create Applicant's invention.

Applicant further amends independent claims 15 and 23 to distinguish Applicant's claimed invention from the Furukawa/McHugh combination. Specifically, the Furukawa/McHugh combination fails to teach an anti-pinch system which uses redundant sensing devices to detect not only a pinch condition based on window position, but also the presence of an obstruction in the area between the window and window frame. Independent claim 1 is amended to distinguish over the Furukawa/McHugh combination, reciting that the coding arrangement is etched into the window, which is neither taught nor suggested by the either reference or the combination of references.

The Furukawa/McHugh combination clearly fails to obviate Applicant's claimed invention. Applicant believes that claims 1, 3, 6-9, 11-15, 18 and 20-26 are patentable over


the references combined by the Examiner. Applicant respectfully requests reconsideration of the claims as presented.

B. Conclusion

Applicant has made a genuine effort to respond to each of the Examiner's objections and rejections in an effort to advance the prosecution of this case. Applicant believes that all formal and substantive requirements for patentability have been met and that this case is in condition for allowance, which action is respectfully requested. If any additional issues need to be resolved, the Examiner is requested to telephone the undersigned at his convenience.

Please charge the one month extension of time fee or credit any overpayments as a result of the filing of this paper to our Deposit Account No. 02-3978.

Respectfully submitted,
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